

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

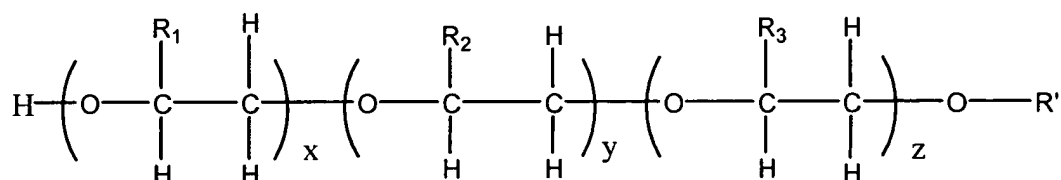
### Listing of Claims:

1. (Currently Amended) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate for a period of time sufficient to remove a desired level [~~by removing substantially all~~] of a contaminant from the substrate with in presence of at least one organic solvent and in absence of pressurized fluid solvent ~~liquid carbon dioxide~~, the organic solvent comprising less than 50% by weight water;

removing at least a portion of the organic solvent from the presence of the substrate; and  
thereafter removing a remaining portion of the organic solvent from the substrate[s] using at least one pressurized fluid solvent<sub>1</sub>[;] wherein:

(a) the organic solvent is of the structural formula:



wherein x, y, and z each is zero or one;

at least one of x, y, and z is one;

R' is C<sub>j</sub>H<sub>2j+1</sub> wherein j is an integer between one and (13-3(x+y+z)), inclusive; and

R<sub>1-3</sub> are independently H or CH<sub>3</sub>; and

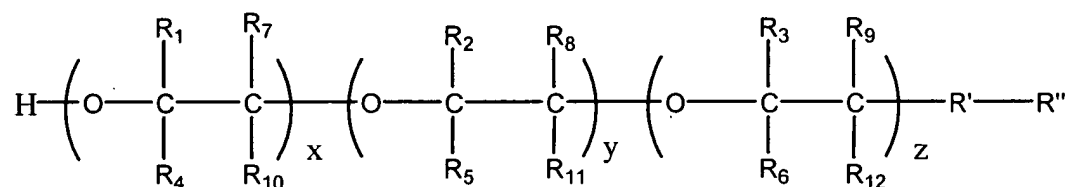
(b) [~~wherein~~] when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

2. (Currently Amended) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate for a period of time sufficient to remove a desired level [by ~~removing substantially all~~] of a contaminant from the substrate with in presence of at least one organic solvent and in absence of pressurized fluid solvent liquid carbon dioxide, the organic solvent comprising less than 50% by weight water;

removing at least a portion of the organic solvent from the presence of the substrate; and  
thereafter removing a remaining portion of the organic solvent from the substrate[s] using at least one pressurized fluid solvent<sub>1</sub>[;] wherein:

(a) the organic solvent is of the structural formula:



wherein x, y, and z each is zero or one;

at least one of x, y, and z is one;

R'' is benzyl, phenyl, partially or fully fluorinated benzyl or phenyl, C<sub>j</sub>H<sub>2j+1</sub>, or C<sub>j</sub>H<sub>a</sub>F<sub>b</sub> wherein j is an integer between one and (13-3(x+y+z)), inclusive, a and b each is independently an integer between zero and 2j+1, inclusive, and a+b=2j+1;

R<sub>1-12</sub> are independently C<sub>m</sub>H<sub>n</sub>F<sub>p</sub> or C<sub>d</sub>H<sub>e</sub>F<sub>g</sub> where m is an integer between zero and two, inclusive, n and p are integers between zero and five, inclusive and n+p=2m+1, d is an integer between zero and two, inclusive, e and g are integers between zero and five, inclusive, and e+g=2d+1; and

R' is O, S, carbonyl or ester; and

(b) ~~wherein~~ when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

3. (Original) The process of claim 2 wherein:

R' is O;

R''' is C<sub>j</sub>H<sub>2j+1</sub>;

R<sub>1-3</sub> are independently H or CH<sub>3</sub>; and

R<sub>4-12</sub> each is H.

4. (Original) The process of claim 2 wherein:  
R' is S, carbonyl or ester;  
R'' is C<sub>j</sub>H<sub>2j+1</sub>;  
R<sub>1-3</sub> are independently H or CH<sub>3</sub>; and  
R<sub>4-12</sub> each is H.
5. (Original) The process of claim 2 wherein:  
R' is O;  
R'' is C<sub>j</sub>H<sub>2j+1</sub>;  
R<sub>1-3</sub> are independently H, CH<sub>3</sub>, or C<sub>2</sub>H<sub>5</sub>; and  
at least one of R<sub>1-3</sub> is CH<sub>2</sub>CH<sub>3</sub>; and  
R<sub>4-12</sub> are each H.
6. (Original) The process of claim 2 wherein:  
R' is S, carbonyl or ester;  
R'' is C<sub>j</sub>H<sub>2j+1</sub>;  
R<sub>1-3</sub> are independently H, CH<sub>3</sub>, or C<sub>2</sub>H<sub>5</sub>; and  
at least one of R<sub>1-3</sub> is CH<sub>2</sub>CH<sub>3</sub>; and  
R<sub>4-12</sub> are each H.
7. (Original) The process of claim 2 wherein:  
R' is O;  
R'' is C<sub>j</sub>H<sub>2j+1</sub>;  
R<sub>1-9</sub> are each H;  
R<sub>10-12</sub> are independently H or CH<sub>3</sub>; and  
at least one of R<sub>10-12</sub> is CH<sub>3</sub>.
8. (Original) The process of claim 2 wherein:  
R' is S, carbonyl or ester;  
R'' is C<sub>j</sub>H<sub>2j+1</sub>;  
R<sub>1-9</sub> are each H;  
R<sub>10-12</sub> are independently H or CH<sub>3</sub>; and  
at least one of R<sub>10-12</sub> is CH<sub>3</sub>.

9. (Original) The process of claim 2 wherein:
- R' is O;
  - R'' is  $C_jH_{2j+1}$ ;
  - R<sub>1-9</sub> are each H;
  - R<sub>10-12</sub> are independently H, CH<sub>3</sub>, or C<sub>2</sub>H<sub>5</sub>; and
  - at least one of R<sub>10-12</sub> is CH<sub>2</sub>CH<sub>3</sub>.
10. (Original) The process of claim 2 wherein:
- R' is S, carbonyl or ester;
  - R'' is  $C_jH_{2j+1}$ ;
  - R<sub>1-9</sub> are each H;
  - R<sub>10-12</sub> are independently H, CH<sub>3</sub>, or C<sub>2</sub>H<sub>5</sub>; and
  - at least one of R<sub>10-12</sub> is CH<sub>2</sub>CH<sub>3</sub>.
11. (Original) The process of claim 2 wherein:
- R' is O;
  - R'' is  $C_jH_aF_b$ ;
  - R<sub>1-3</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub>, or CF<sub>3</sub>;
  - And at least one is CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub>, or CF<sub>3</sub>; and
  - R<sub>4-12</sub> are independently H or F.
12. (Original) The process of claim 2 wherein:
- R' is S, carbonyl, or ester;
  - R'' is  $C_jH_aF_b$ ;
  - R<sub>1-3</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub>, or CF<sub>3</sub>;
  - And at least one is CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub>, or CF<sub>3</sub>; and
  - R<sub>4-12</sub> are independently H or F.
13. (Original) The process of claim 2 wherein:
- R<sub>1-3</sub> are independently  $C_mH_nF_p$ ;
  - at least one of R<sub>1-3</sub> is  $C_2H_nF_p$ ;
  - R<sub>4-12</sub> are independently H or F;
  - R'' is O; and

R'' is C<sub>j</sub>H<sub>a</sub>F<sub>b</sub>.

14. (Original) The process of claim 2 wherein:

R<sub>1-3</sub> are independently C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>;

at least one of R<sub>1-3</sub> is C<sub>2</sub>H<sub>n</sub>F<sub>p</sub>;

R<sub>4-12</sub> are independently H or F;

R' is S, carbonyl or ester; and

R'' is C<sub>j</sub>H<sub>a</sub>F<sub>b</sub>.

15. (Original) The process of claim 2 wherein:

R<sub>1-9</sub> are independently H or F;

R<sub>10-12</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;

at least one of R<sub>10-12</sub> is CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;

R' is O; and

R'' is C<sub>j</sub>H<sub>a</sub>F<sub>b</sub>.

16. (Original) The process of claim 2 wherein:

R<sub>1-9</sub> are independently H or F;

R<sub>10-12</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;

at least one of R<sub>10-12</sub> is CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;

R' is S, carbonyl or ester; and

R'' is C<sub>j</sub>H<sub>a</sub>F<sub>b</sub>.

17. (Original) The process of claim 2 wherein:

R' is O;

R'' is C<sub>j</sub>H<sub>a</sub>F<sub>b</sub>;

R<sub>1-3</sub> are independently C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>;

R<sub>4-9</sub> are independently H or F; and

R<sub>10-12</sub> are independently C<sub>d</sub>H<sub>e</sub>F<sub>g</sub>.

18. (Original) The process of claim 2 wherein:

R' is S, carbonyl or ester;

R'' is C<sub>j</sub>H<sub>a</sub>F<sub>b</sub>;

$R_{1-3}$  are independently  $C_mH_nF_p$ ;  
 $R_{4-9}$  are independently H or F; and  
 $R_{10-12}$  are independently  $C_dH_eF_g$ .

19. (Original) The process of claim 2 wherein:

$R'$  is O;  
 $R''$  is benzyl or phenyl;  
 $R_{1-3}$  are independently H,  $CH_3$ , or  $C_2H_5$ ;  
at least one of  $R_{1-3}$  is  $CH_2CH_3$ ; and  
 $R_{4-12}$  are each H.

20. (Original) The process of claim 2 wherein:

$R'$  is S, carbonyl or ester;  
 $R''$  is benzyl or phenyl;  
 $R_{1-3}$  are independently H,  $CH_3$ , or  $C_2H_5$ ;  
at least one of  $R_{1-3}$  is  $CH_2CH_3$ ; and  
 $R_{4-12}$  are each H.

21. (Original) The process of claim 2 wherein:

$R'$  is O;  
 $R''$  is benzyl or phenyl;  
 $R_{1-9}$  are each H;  
 $R_{10-12}$  are independently H or  $CH_3$ ; and  
at least one of  $R_{10-12}$  is  $CH_3$ .

22. (Original) The process of claim 2 wherein:

$R'$  is S, carbonyl or ester;  
 $R''$  is benzyl or phenyl;  
 $R_{1-9}$  are each H;  
 $R_{10-12}$  are independently H or  $CH_3$ ; and  
at least one of  $R_{10-12}$  is  $CH_3$ .

23. (Original) The process of claim 2 wherein:

R' is O;  
R'' is benzyl or phenyl;  
R<sub>1-9</sub> are each H;  
R<sub>10-12</sub> are independently H, CH<sub>3</sub>, or C<sub>2</sub>H<sub>5</sub>; and  
at least one of R<sub>10-12</sub> is CH<sub>2</sub>CH<sub>3</sub>.

24. (Original) The process of claim 2 wherein:

R' is S, carbonyl or ester;  
R'' is benzyl or phenyl;  
R<sub>1-9</sub> are each H;  
R<sub>10-12</sub> are independently H, CH<sub>3</sub>, or C<sub>2</sub>H<sub>5</sub>; and  
at least one of R<sub>10-12</sub> is CH<sub>2</sub>CH<sub>3</sub>.

25. (Original) The process of claim 2 wherein:

R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;  
R<sub>1-3</sub> are independently C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>;  
at least one of R<sub>1-3</sub> is C<sub>2</sub>H<sub>n</sub>F<sub>p</sub>;  
R<sub>4-12</sub> are independently H or F; and  
R' is O.

26. (Original) The process of claim 2 wherein:

R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;  
R<sub>1-3</sub> are independently C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>;  
at least one of R<sub>1-3</sub> is C<sub>2</sub>H<sub>n</sub>F<sub>p</sub>;  
R<sub>4-12</sub> are independently H or F; and  
R' is S, carbonyl or ester.

27. (Original) The process of claim 2 wherein:

R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;  
R<sub>1-9</sub> are independently H or F;  
R<sub>10-12</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;  
at least one of R<sub>10-12</sub> is CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>; and  
R' is O.

28. (Original) The process of claim 2 wherein:  
R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;  
R<sub>1-9</sub> are independently H or F;  
R<sub>10-12</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;  
at least one of R<sub>10-12</sub> is CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>; and  
R' is S, carbonyl or ester.

29. (Original) The process of claim 2 wherein:  
R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;  
R<sub>1-9</sub> are independently H or F;  
R<sub>10-12</sub> are independently C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>;  
at least one of R<sub>10-12</sub> is C<sub>2</sub>H<sub>n</sub>F<sub>p</sub>; and  
R' is O.

30. (Original) The process of claim 2 wherein:  
R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;  
R<sub>1-9</sub> are independently H or F;  
R<sub>10-12</sub> are independently C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>;  
at least one of R<sub>10-12</sub> is C<sub>2</sub>H<sub>n</sub>F<sub>p</sub>; and  
R' is S, carbonyl or ester.

31. (Original) The process of claim 2 wherein:  
R' is O;  
R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;  
R<sub>1-3</sub> are independently C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>;  
R<sub>4-9</sub> are independently H or F; and  
R<sub>10-12</sub> are independently C<sub>d</sub>H<sub>e</sub>F<sub>g</sub>.

32. (Original) The process of claim 2 wherein:  
R' is S, carbonyl or ester;  
R'' is benzyl, phenyl, or partially or fully fluorinated benzyl or phenyl;  
R<sub>1-3</sub> are independently C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>;  
R<sub>4-9</sub> are independently H or F; and



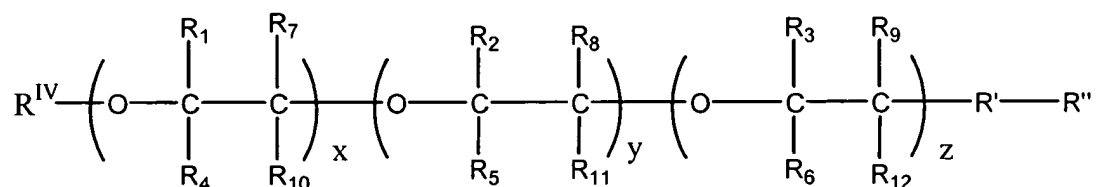
$R_{10-12}$  are independently  $C_dH_eF_g$ .

33. (Currently Amended) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate for a period of time sufficient to remove a desired level [by ~~removing substantially all~~] of a contaminant from the substrate with in presence of at least one organic solvent and in absence of pressurized fluid solvent liquid carbon dioxide, the organic solvent comprising less than 50% by weight water;

removing at least a portion of the organic solvent from the presence of the substrate; and thereafter removing a remaining portion of the organic solvent from the substrate[s] using at least one pressurized fluid solvent,<sub>[;]</sub> wherein:

the organic solvent is of the structural formula:



wherein x, y, and z each is zero or one;

at least one of x, y, and z is one;

$R''$  is  $C_jH_{2j+1}$  or  $C_jH_uF_v$  and  $R^{IV}$  is  $C_kH_{2k+1}$  or  $C_kH_rF_s$  wherein j and k are each an integer between one and  $(13-3(x+y+z))$ , inclusive, and  $j+k$  is an integer between two and  $(13-3(x+y+z))$ , inclusive, u and v are each an integer between zero and  $2j+1$ , inclusive, and  $u+v=2j+1$ , and r and s are each an integer between zero and  $2k+1$ , inclusive, and  $r+s=2k+1$ , and if k equals zero, then s equals zero;

$R_{1-3}$  and  $R_{10-12}$  are independently  $C_mH_nF_p$ , where m is an integer between zero and two, inclusive, n and p are integers between zero and five, inclusive and  $n+p=2m+1$ ;

$R_{4,9}$  are independently H, F,  $CH_3$ ,  $CH_2F$ ,  $CHF_2$ , or  $CF_3$ ; and

$R'$  is O, S, carbonyl or ester, and if  $R'$  is O or S and j equals zero then v equals zero; and

wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

34. (Original) The process of claim 33 wherein:

R' is O;  
R'' is  $C_jH_{2j+1}$ ;  
 $R^{IV}$  is  $C_kH_{2k+1}$ ;  
 $R_{1-3}$  are independently H or  $CH_3$ ; and  
 $R_{4-12}$  are each H.

35. (Original) The process of claim 33 wherein:

R' is S, carbonyl or ester;  
R'' is  $C_jH_{2j+1}$ ;  
 $R^{IV}$  is  $C_kH_{2k+1}$ ;  
 $R_{1-3}$  are independently H or  $CH_3$ ; and  
 $R_{4-12}$  are each H.

36. (Original) The process of claim 33 wherein:

R' is O;  
R'' is  $C_jH_{2j+1}$ ;  
 $R^{IV}$  is  $C_kH_{2k+1}$ ;  
 $R_{1-3}$  are independently H,  $CH_3$ , or  $C_2H_5$ ;  
at least one of  $R_{1-3}$  is  $CH_2CH_3$ ; and  
 $R_{4-12}$  are each H.

37. (Original) The process of claim 33 wherein:

R' is S, carbonyl or ester;  
R'' is  $C_jH_{2j+1}$ ;  
 $R^{IV}$  is  $C_kH_{2k+1}$ ;  
 $R_{1-3}$  are independently H,  $CH_3$ , or  $C_2H_5$ ;  
at least one of  $R_{1-3}$  is  $CH_2CH_3$ ; and  
 $R_{4-12}$  are each H.

38. (Original) The process of claim 33 wherein:

R' is O;  
R'' is  $C_jH_{2j+1}$ ;

$R^{IV}$  is  $C_kH_{2k+1}$ ;  
 $R_{1-9}$  are each H;  
 $R_{10-12}$  are independently H or  $CH_3$ ; and  
at least one of  $R_{10-12}$  is  $CH_3$ .

39. (Original) The process of claim 33 wherein:

$R'$  is S, carbonyl or ester;  
 $R''$  is  $C_jH_{2j+1}$ ;  
 $R^{IV}$  is  $C_kH_{2k+1}$ ;  
 $R_{1-9}$  are each H;  
 $R_{10-12}$  are independently H or  $CH_3$ ; and  
at least one of  $R_{10-12}$  is  $CH_3$ .

40. (Original) The process of claim 33 wherein:

$R'$  is O;  
 $R''$  is  $C_jH_{2j+1}$ ;  
 $R^{IV}$  is  $C_kH_{2k+1}$ ;  
 $R_{1-9}$  are each H;  
 $R_{10-12}$  are independently H,  $CH_3$ , or  $C_2H_5$ ; and  
at least one of  $R_{10-12}$  is  $CH_2CH_3$ .

41. (Original) The process of claim 33 wherein:

$R'$  is S, carbonyl or ester;  
 $R''$  is  $C_jH_{2j+1}$ ;  
 $R^{IV}$  is  $C_kH_{2k+1}$ ;  
 $R_{1-9}$  are each H;  
 $R_{10-12}$  are independently H,  $CH_3$ , or  $C_2H_5$ ; and  
at least one of  $R_{10-12}$  is  $CH_2CH_3$ .

42. (Original) The process of claim 33 wherein:

$R_{1-3}$  are independently H, F,  $CH_3$ ,  $CH_2F$ ,  $CHF_2$ , or  $CF_3$ ;  
 $R_{4-12}$  are independently H or F; and  
 $R'$  is O.

43. (Original) The process of claim 33 wherein:  
R<sub>1-3</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub>, or CF<sub>3</sub>;  
R<sub>4-12</sub> are independently H or F; and  
R' is S, carbonyl or ester.
44. (Original) The process of claim 33 wherein:  
at least one of R<sub>1-3</sub> is C<sub>2</sub>H<sub>n</sub>F<sub>p</sub>;  
R<sub>4-12</sub> are each independently H or F; and  
R' is O.
45. (Original) The process of claim 33 wherein:  
at least one of R<sub>1-3</sub> is C<sub>2</sub>H<sub>n</sub>F<sub>p</sub>;  
R<sub>4-12</sub> are each independently H or F; and  
R' is S, carbonyl or ester.
46. (Original) The process of claim 33 wherein:  
R<sub>1-9</sub> are independently H or F;  
R<sub>10-12</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;  
at least one of R<sub>10-12</sub> is CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>; and  
R' is O.
47. (Original) The process of claim 33 wherein:  
R<sub>1-9</sub> are independently H or F;  
R<sub>10-12</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;  
at least one of R<sub>10-12</sub> is CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>; and  
R' is S, carbonyl or ester.
48. (Original) The process of claim 33 wherein:  
R<sub>1-9</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;  
at least one of R<sub>10-12</sub> is C<sub>2</sub>H<sub>n</sub>F<sub>p</sub>; and  
R' is O.
49. (Original) The process of claim 33 wherein:  
R<sub>1-9</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>;

at least one of R<sub>10-12</sub> is C<sub>2</sub>H<sub>n</sub>F<sub>p</sub>; and

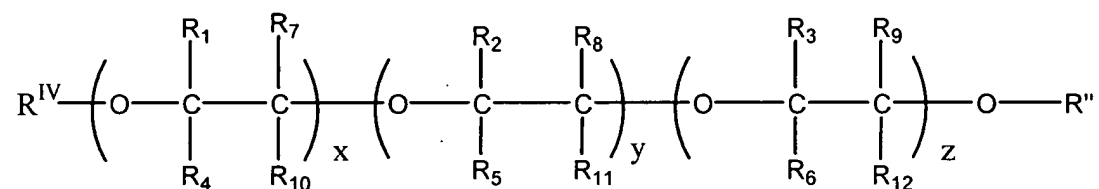
R' is S, carbonyl or ester.

50. (Currently Amended) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate for a period of time sufficient to remove a desired level [by ~~removing substantially all~~] of a contaminant from the substrate with in presence of at least one organic solvent and in absence of pressurized fluid solvent liquid carbon dioxide, the organic solvent comprising less than 50% by weight water;

removing at least a portion of the organic solvent from the presence of the substrate; and  
thereafter removing a remaining portion of the organic solvent from the substrate[s] using  
at least one pressurized fluid solvent, [;] wherein:

the organic solvent is of the structural formula:

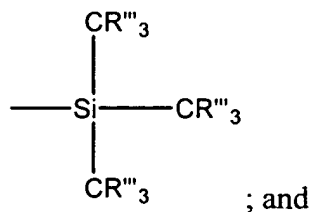
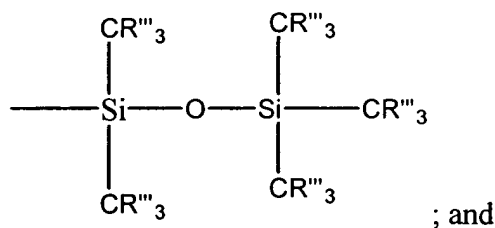


wherein x, y, and z are each zero or one;

at least one of x, y, and z is one;

R'' is selected from the group consisting of:

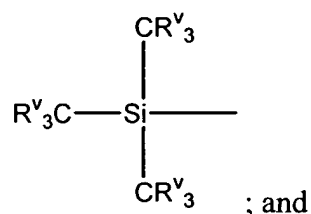
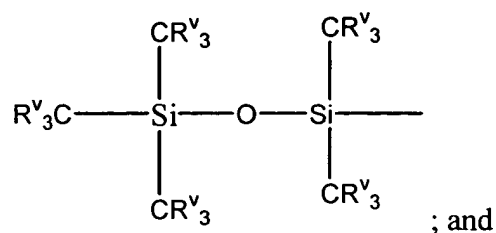
H;



wherein R''' is H, F or combinations of H and F;

R<sup>IV</sup> is selected from the group consisting of:

H;



wherein R<sup>V</sup> is H, F or combinations of H and F; and

when R'' is H or F, R<sup>IV</sup> is not H or F;

R<sub>1-3</sub> are independently H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub> or CF<sub>3</sub>; and

R<sub>4-12</sub> are independently H or F;

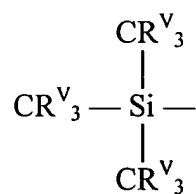
wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

51. (Original) The process of claim 50 wherein:

R<sup>IV</sup> is:

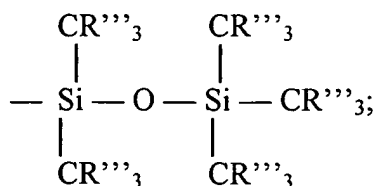
H

or



wherein R<sup>V</sup> is H, F or combinations of H and F; and

R'' is:



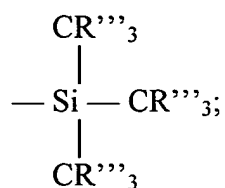
wherein R''' is H, F or combinations of H and F.

52. (Original) The process of claim 50 wherein:

R'' is:

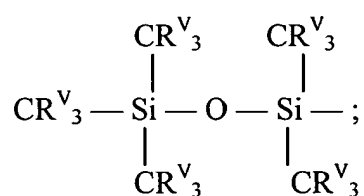
H

or



wherein R''' is H, F or combinations of H and F; and

R<sup>IV</sup> is:



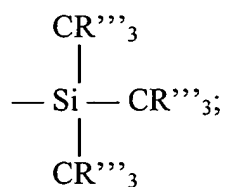
wherein R<sup>V</sup> is H, F or combinations of H and F.

53. (Original) The process of claim 50 wherein:

R'' is:

H;

F; or

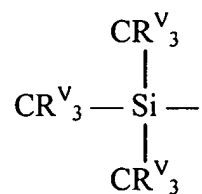


wherein R''' is H, F or combinations of H and F; and

R<sup>IV</sup> is:

H;

F; or



wherein R<sup>V</sup> is H, F or combinations of H and F; and

when R'' is H or F, R<sup>IV</sup> is not H or F.

54. (Original) The process of claim 50 wherein:

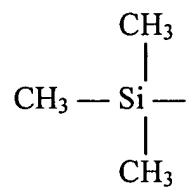
$R_{1-3}$  are independently H or  $CH_3$ ;

$R_{4-12}$  are each H;

$R^{IV}$  is:

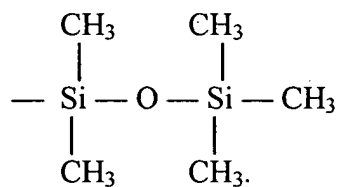
H

or



and

$R''$  is:



55. (Original) The process of claim 50 wherein:

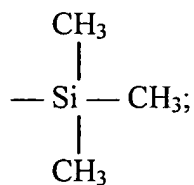
$R_{1-3}$  are independently H or  $CH_3$ ;

$R_{4-12}$  are each H;

$R''$  is:

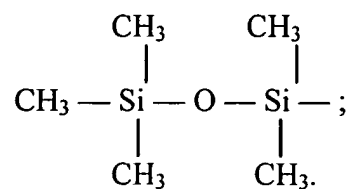
H

or



and

$R^{IV}$  is:



56. (Original) The process of claim 50 wherein:



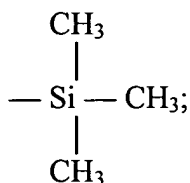
R<sub>1-3</sub> are independently H or CH<sub>3</sub>;

R<sub>4-12</sub> are each H;

R'' is:

H;

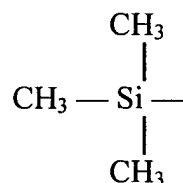
or



R<sup>IV</sup> is:

H;

or



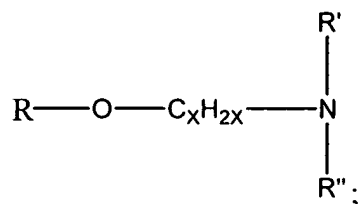
and when R'' is H, R<sup>IV</sup> is not H.

57. (Currently Amended) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

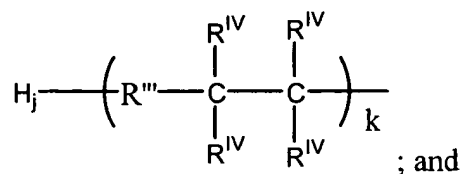
cleaning the substrate for a period of time sufficient to remove a desired level [by removing substantially all] of a contaminant from the substrate with in presence of at least one organic solvent and in absence of pressurized fluid solvent liquid carbon dioxide, the organic solvent comprising less than 50% by weight water;

removing at least a portion of the organic solvent from the presence of the substrate; and thereafter removing a remaining portion of the organic solvent from the substrate[s] using at least one pressurized fluid solvent,<sub>1</sub>[s] wherein:

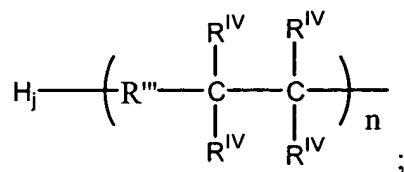
the organic solvent is of the structural formula:



wherein R' is



R'' is independently



wherein R''' is O and j is 1 or R''' is N and j is 2;

n is an integer between zero and two;

R<sup>IV</sup> are each independently H, CH<sub>3</sub> or CH<sub>2</sub>CH<sub>3</sub> and k is an integer between zero and two inclusive; and

wherein R is C<sub>y</sub>H<sub>2y+1</sub> and y is an integer between one and (12- (3k+3n+x)) inclusive, and x is an integer between one and (12-(3k+y)), inclusive; and

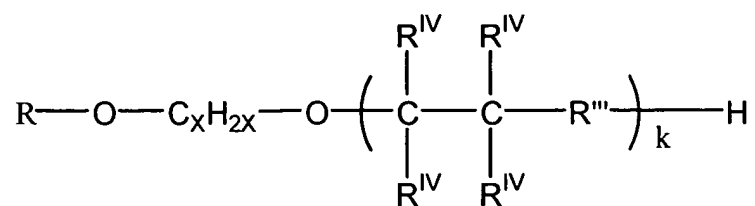
wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

58. (Amended three times) A process for cleaning a substrate selected from the group consisting of a textile, a flexible structure, a precision structure, a delicate structure, and a porous structure, comprising:

cleaning the substrate for a period of time sufficient to remove a desired level [~~by removing substantially all~~] of a contaminant from the substrate with in presence of at least one organic solvent and in absence of pressurized fluid solvent ~~liquid carbon dioxide~~, the organic solvent comprising less than 50% by weight water;

removing at least a portion of the organic solvent from the presence of the substrate; and  
thereafter removing a remaining portion of the organic solvent from the substrate[s] using at least one pressurized fluid solvent, [;] wherein:

the organic solvent is of the structural formula:



wherein R''' is O or NH;

R<sup>IV</sup> are each independently H, CH<sub>3</sub> or CH<sub>2</sub>CH<sub>3</sub> and k is an integer between zero and two inclusive; and

wherein R is C<sub>y</sub>H<sub>2y+1</sub> and y is an integer between one and (12- (3k+x)) inclusive, and x is an integer between one and (12-(3k+y)), inclusive; and

wherein when the pressurized fluid solvent is liquid carbon dioxide, the liquid carbon dioxide is at a subcritical condition.

59. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the organic solvent contains 5 or more carbon atoms.
60. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the organic solvent has a flash point of greater than 200° F.
61. (Previously Presented) The process of claim 1, wherein the organic solvent is selected from the group consisting of propylene glycol t-butyl ether, dipropylene glycol methyl ether, tripropylene glycol methyl ether, dipropylene glycol n-butyl ether, dipropylene glycol n-propyl ether, and tripropylene glycol n-butyl ether.
62. (Previously Presented) The process of any of claim 1, 2, 33, 50, 57, or 58, wherein the organic solvent further comprises one or more co-solvents, detergents, or additives to enhance cleaning capability.
63. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent is between approximately 5° C to approximately 30° C.
64. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent comprises liquid carbon dioxide.

65. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent is at a pressure of between approximately 600 pounds per square inch to approximately 1050 pounds per square inch.
66. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent is at a pressure of between approximately 570 pounds per square inch to approximately 830 pounds per square inch.
67. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the pressurized fluid solvent comprises xenon, nitrous oxide, or sulfur hexafluoride.
68. (Previously Presented) The process of claim 67, wherein the pressurized fluid solvent is compressed to a subcritical condition.
69. (Previously Presented) The process of claim 68, wherein the pressurized fluid solvent is a liquid.
70. (Previously Presented) The process of claim 67, wherein the pressurized fluid solvent is compressed to a supercritical condition.
71. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the textile comprises a fabric, an article of clothing, a protective cover, a carpet, upholstery, furniture, or a window treatment.
72. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the contaminant comprises an insoluble particulate.
73. (Previously Presented) The process of any of claims 1, 2, 33, 50, 57, or 58, wherein the contaminant comprises an organic solvent soluble oil, or an organic solvent soluble grease.
74. (Previously Presented) The process of claim 2, wherein:  
R<sub>1-3</sub> are independently selected from the group consisting of H, F, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub>, CF<sub>3</sub>, and C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>;  
R<sub>4-9</sub> are independently selected from the group consisting of H and F; and

$R_{10-12}$  are independently selected from the group consisting of H, F,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2F$ ,  $CHF_2$ ,  $CF_3$ ,  $C_dH_eF_g$ , and  $C_mH_nF_p$ .

75. (Previously Presented) The process of claim 74, wherein  $R_{1-3}$  are independently selected from the group consisting of H and  $CH_3$ .
76. (Previously Presented) The process of claim 74, wherein  $R_{1-3}$  are independently selected from the group consisting of H,  $CH_3$ , and  $CH_2CH_3$ .
77. (Previously Presented) The process of claim 74, wherein  $R_{1-3}$  are independently selected from the group consisting of H, F,  $CH_3$ ,  $CH_2F$ ,  $CHF_2$ , and  $CF_3$ .
78. (Previously Presented) The process of claim 74, wherein  $R_{1-3}$  are  $C_mH_nF_p$ .
79. (Previously Presented) The process of claim 74, wherein  $R_{4-9}$  are H.
80. (Previously Presented) The process of claim 74, wherein  $R_{4-9}$  are F.
81. (Previously Presented) The process of claim 74, wherein  $R_{10-12}$  are H.
82. (Previously Presented) The process of claim 74, wherein  $R_{10-12}$  are independently selected from the group consisting of H or F.
83. (Previously Presented) The process of claim 74, wherein  $R_{10-12}$  are independently selected from the group consisting of H and  $CH_3$ .
84. (Previously Presented) The process of claim 74, wherein  $R_{10-12}$  are independently selected from the group consisting of H,  $CH_3$ , and  $CH_2CH_3$ .
85. (Previously Presented) The process of claim 74, wherein  $R_{10-12}$  are independently selected from the group consisting of H, F,  $CH_3$ ,  $CH_2F$ ,  $CHF_2$ , and  $CF_3$ .
86. (Previously Presented) The process of claim 74, wherein  $R_{10-12}$  are  $C_dH_eF_g$ .
87. (Previously Presented) The process of claim 74, wherein  $R_{10-12}$  are  $C_mH_nF_p$ .
88. (Previously Presented) The process of claim 2, wherein  $R'$  is O.

89. (Previously Presented) The process of claim 2, wherein R' is selected from the group consisting of S, carbonyl, and ester.
90. (Previously Presented) The process of claim 33, wherein:  
R<sub>1-3</sub> and R<sub>10-12</sub> are independently selected from the group consisting of H, F, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub>, CF<sub>3</sub>, and C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>; and  
R<sub>4-9</sub> are independently selected from the group consisting of H, F, and CH<sub>3</sub>.
91. (Previously Presented) The process of claim 90, wherein R<sub>1-3</sub> and R<sub>10-12</sub> are H.
92. (Previously Presented) The process of claim 90, wherein R<sub>1-3</sub> and R<sub>10-12</sub> are independently selected from the group consisting of H and CH<sub>3</sub>.
93. (Previously Presented) The process of claim 90, wherein R<sub>1-3</sub> and R<sub>10-12</sub> are independently selected from the group consisting of H, CH<sub>3</sub>, and CH<sub>2</sub>CH<sub>3</sub>.
94. (Previously Presented) The process of claim 90, wherein R<sub>1-3</sub> and R<sub>10-12</sub> are independently selected from the group consisting of H, F, CH<sub>3</sub>, CH<sub>2</sub>F, CHF<sub>2</sub>, and CF<sub>3</sub>.
95. (Previously Presented) The process of claim 90, wherein R<sub>1-3</sub> and R<sub>10-12</sub> are C<sub>m</sub>H<sub>n</sub>F<sub>p</sub>.
96. (Previously Presented) The process of claim 90, wherein R<sub>4-9</sub> are H.
97. (Previously Presented) The process of claim 90, wherein R<sub>4-9</sub> are independently selected from the group consisting of H and F.
98. (Previously Presented) The process of claim 33, wherein R' is O.
99. (Previously Presented) The process of claim 33, wherein R'' is C<sub>j</sub>H<sub>2j+1</sub>.
100. (Previously Presented) The process of claim 33, wherein R'' is C<sub>j</sub>H<sub>u</sub>F<sub>v</sub>.
101. (Previously Presented) The process of claim 33, wherein R<sup>IV</sup> is C<sub>k</sub>H<sub>2k+1</sub>.
102. (Previously Presented) The process of claim 33, wherein R<sup>IV</sup> is C<sub>k</sub>H<sub>r</sub>F<sub>s</sub>.

103. (New) The process of Claim 1 wherein said desired level of a contaminant comprises at least a significant portion of said contaminant.
104. (New) The process of Claim 2 wherein said desired level of a contaminant comprises at least a significant portion of said contaminant.
105. (New) The process of Claim 33 wherein said desired level of a contaminant comprises at least a significant portion of said contaminant.
106. (New) The process of Claim 50 wherein said desired level of a contaminant comprises at least a significant portion of said contaminant.
107. (New) The process of Claim 57 wherein said desired level of a contaminant comprises at least a significant portion of said contaminant.
108. (New) The process of Claim 58 wherein said desired level of a contaminant comprises at least a significant portion of said contaminant.